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April 8, 2005

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TO	COMPANY	TELEPHONE	FACSIMILE
Examiner Max Noori	US Patent and Trademark Office Alexandria, Virginia		571.273.2185 AND 703.872.9306
FROM	COMPANY	TELEPHONE	FACSIMILE
Brian B. Shaw OUR FILE: 581/85939.000681	HARTER, SECREST & EMERY LLP	585-231-1193	585-232-2152

TOTAL NUMBER OF PAGES SENT (INCLUDING THIS COVER SHEET): 29 pages

MESSAGE OR SPECIAL INSTRUCTIONS:

As requested by Examiner Max Noori, we are retransmitting the Declaration of Prior Invention in the United States to Overcome Cited Patent Pursuant to 37 CFR 1.131.

*please
scan this
affidavit.*

Thanks

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PAGE 1/29 * RCVD AT 4/8/2005 4:22:47 PM [Eastern Daylight Time] * SVR:USPTO-EFAX-1/24 * DNIS:2732185 * CSID:585 232 2152 * DURATION (mm:ss):09:10 NEW YORK

PTO/SB-07 (08-03)

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I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Attention Examiner Max Noori at facsimile number 571.273.2185 and at facsimile number 703.872.9306.

On April 8, 2005

Date



Signature

Paula Weil

Note: Each paper must have its own certificates of mailing, or this certificate must identify each submitted paper.

ATTACHED ARE:

Declaration of Prior Invention in the United States to Overcome Cited
Patent Pursuant to 37 CFR § 1.131 (27 pages);
Facsimile Cover Sheet (1 page)

Attorney Docket No.: 85939.000681
Confirmation No.: 7303

This collection of information is required by 37 CFR 1.8. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.8 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199.

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Confirmation No: 7303

Applicant: Willett, Kevin R.

Atty. Docket: 85939.000681

Serial No.: 10/670,827

Examiner: Noori, Max H.

Filed: September 25, 2003

Art Unit: 2855

Title: LABORATORY WEAR AND DRAG FORCE TESTING SYSTEM

Declaration of Prior Invention in the United States to Overcome Cited PatentPursuant to 37 CFR §1.131

Commissioner for Patents

PO Box 1450

Alexandria, VA 22313-1450

I, Kevin R. Willett, the inventor in the above-referenced application hereby declare as follows:

1. This Declaration is to establish conception of the invention of this application in the United States at a date prior to February 24, 2003, which is the effective date of US Patent No. 6,715,336 as cited by the examiner, and due diligence from a date prior to the effective date of U.S. Patent No. 6,715,336 to filing the present application.

2. I am the sole inventor of the present application.

3. To establish the date of conception of the invention of this application, the following attached documents are submitted as evidence:

(a) A redacted memo to laboratory manager Debbie Massey outlining the objectives and requirements of the presently claimed system. The memo is signed by Ms. Massey. The memo was signed prior to February 24, 2003 and the date has been redacted. This memo was prior to assignment of a project number and thus, identifies the project as SSTC Laboratory Abrasion Testing Machine;

(b) A redacted review of meeting presentation, including 7 pages of figures, with attendee signatures of Ms. Massey, Ted Walker, Randy Kincaid and myself. The review of meeting presentation was signed prior to February 24, 2003 and the date has been redacted. The presentation is entitled 0141B Laboratory Abrasion Tester Design. (The figures generally corresponding Figure 2-8 and non-exploded views of figures 9-17 of the present application).

(c) A redacted request for quote signed by Tennessee Tool & Engineering, Inc., which quote includes the project ID 0141B and a brief written description of the components. The quote is dated prior to February 24, 2003 and has been redacted to remove the date.

(d) A redacted quote from Cornerstone Technical Group, Inc. of Franklin, Tennessee to construct a prototype test stand. The quote is dated prior to February 24, 2003 and has been redacted to remove the date.

(e) A redacted request for quote from Axis Fabrication & Machine Co. for project 0141B for module fabrication. The request is dated prior to February 24, 2003 and has been redacted to remove the date.

(f) A redacted figure of the controller connected to three testing modules. The figure is dated prior to February 24, 2003 and has been redacted to remove the date. This figure generally corresponds to Figure 1 of the present application.

4. From these documents it can be seen that the conception of the invention in this application was prior to February 24, 2003, the effective date of the Xu reference (U.S. Patent 6,715,336).

5. Diligent efforts in reducing the invention to practice were made from prior to February 24, 2003 through the September 25, 2003 filing date of the present application. These efforts included:

- (a) preparing additional requests for quotes for vendor support on specific components of system;
- (b) analyzing and responding to submitted quotes;
- (c) internal financial approval processes;
- (d) continued development of project in parallel with prototype construction;
- (e) preparation of formal Invention Disclosure; and
- (f) working with patent counsel to prepare and file the present application, including review of a plurality of application drafts.

6. The attached memos, drawings, presentations and this declaration establish that the invention was conceived prior to February 24, 2003 and through due diligence was constructively reduced to practice on September 23, 2003 by the filing of the present application.

7. All activity establishing the date of conception and diligence occurred in the US.

8. This declaration is believed timely filed as the filing is before a final rejection.

9. I hereby declare that all statements made of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United State code, and that such willful false statements may jeopardize the validity of the application and any patent Issued thereon.

03/18/2005
Date

Kevin R. Willett
Kevin R. Willett

Sworn to before me this 18
day of March, 2005.

Daniel Willett
Notary Public

3(a)

METZELER**Automotive Profile Systems**

Technical Center
2200 Stock Creek Blvd.
Rockford, Tennessee 37853-3043
Tel: (865) 977-0116 Fax: (865) 977-1663

To: Debbie Massey
Laboratory Manager - SSTC

From: Kevin Willett

Date:

Subject: SSTC Laboratory Abrasion Testing Machine Requirements

For your consideration, the following are objectives and requirements as defined in our meeting on

Project Name: SSTC Laboratory Abrasion Tester

Objectives:

Design, Fabricate and Develop a multi-functional Abrasion testing machine. The machine's design shall allow for the testing of weather-strips using various type of abrading apparatus (i.e. Glass Abrasion, Cloth Scrub Abrasion and Crock Abrasion) as per Automotive customer specifications.

Requirements:

- Unit must be capable of testing up to three (3) samples at one time
- Unit must provide a stable method of securing sample to machine
- Unit must maintain sample in a stationary position
- Unit must provide an accurate and stable means for applying known force weight
- Unit must allow for various types of sample fixturing
- Unit must be capable of applying a force weight of no less than 300 grams and no more than 12 kgs
- Unit must be capable of applying a water/muddy water solution to each sample during operation
- Unit must be capable of measuring the drag force of each of the samples tested during operation
- Unit must provide a means of easy visual inspection of each sample at intervals during testing
- Unit must provide a means for repeatable tool-free set-up and operation.
- Unit must be capable of operating at a temperature range of -20°F to 180°F
- Unit must allow for use of various types of abrasion heads
- Unit must be capable of 0 to 600 cycles per minute (0 to 10 Hz)
- Unit must be capable of toolless adjustable stroke
- Unit footprint to be no larger than 600mm depth x 900mm width (23.6in depth x 35.4in width)
- Unit is to operate on 120VAC 60Hz
- Unit is to be controlled and data acquired by a Programmable PLC
- Acquired data to be downloaded via Ethernet connect to SSTC network

METZELER 

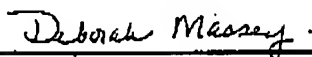
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Rockford, Tennessee 37853-3043
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Additional functions to be considered:


- Use of cameras to inspect samples during machine operation to reduce shutdowns for visual inspection.

If you agree with the above requirements and wish to proceed with the Project, please sign and return


Debbie Massey

Date

Thank you for your consideration,


Kevin Willett
Senior Development Engineer
Metzeler Automotive Profile Systems
Technical Center

3(b)



Automotive Profile Systems

Technical Center
2200 Stock Creek Blvd.
Rockford, Tennessee 37853-3043
Tel: (865) 977-0116 Fax: (865) 977-1663

To: Debbie Massey

From: Kevin Willett

Date:

Subject: 0141B Laboratory Abrasion Tester Design Concept Review Summary

Review Date:

Attendees: Kevin Willett – Presenter
Debbie Massey – Lab Manager
Ted Walker – Testing
Randy Kincaid – Lab Technician

Review of equipment capabilities, set-up and operation for the Glass abrasion and Cloth scrub test (see Presentation file \\6jdp111\DV\Project Tracking\0141B (SSTC Laboratory Abrasion Tester)\Reports\0141B Abrasion Module Demo.ppt)

Please review the Cycle Specification for the equipment for errors based on OEM specifications (see file \\6jdp111\DV\Project Tracking\0141B (SSTC Laboratory Abrasion Tester)\Specifications\0141B Abrasion Tester Cycle Spec.doc)

Thank you for your consideration and input.

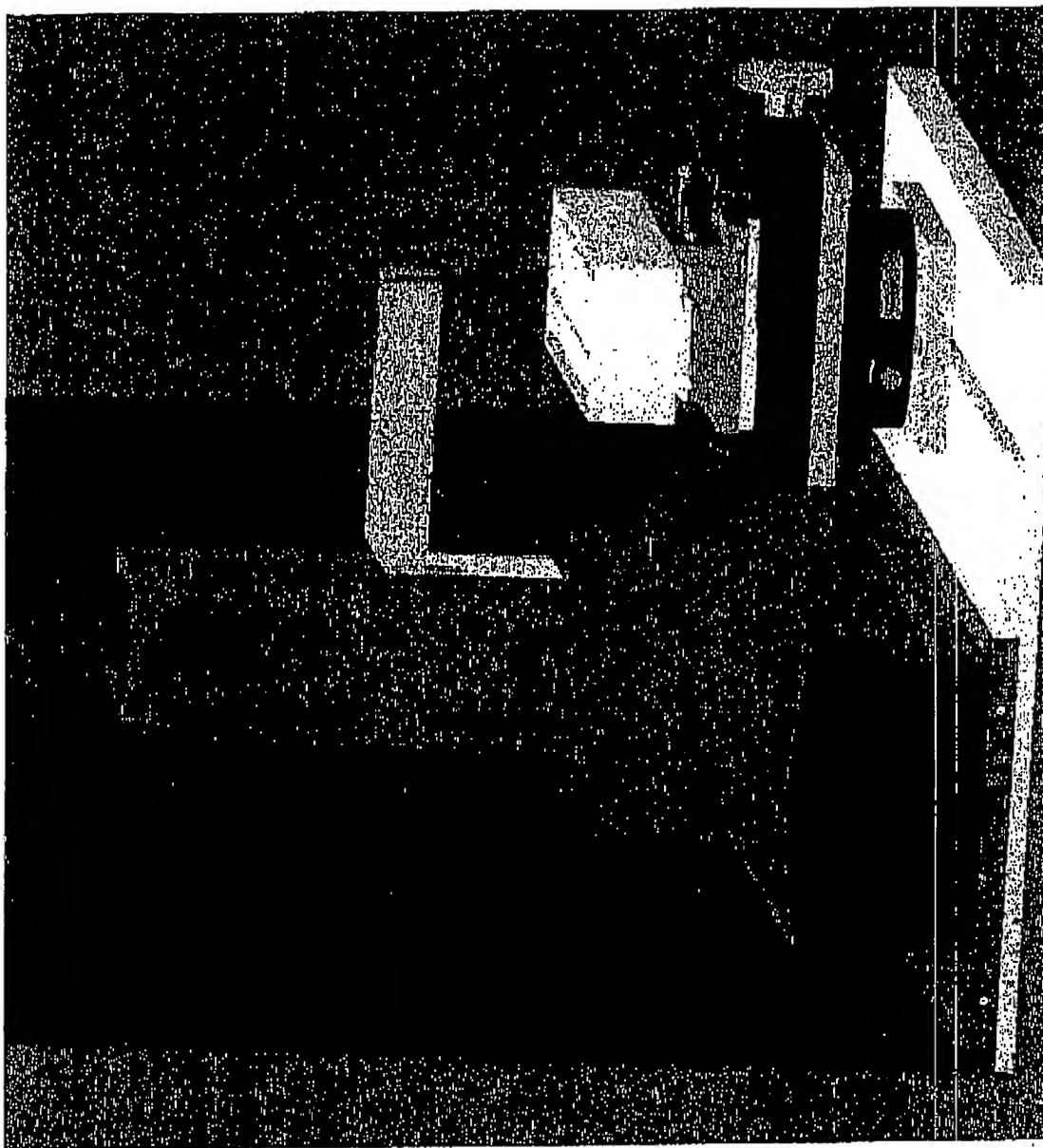
Best Regards,

Kevin Willett

Sr. Development Engineer
Technical Center

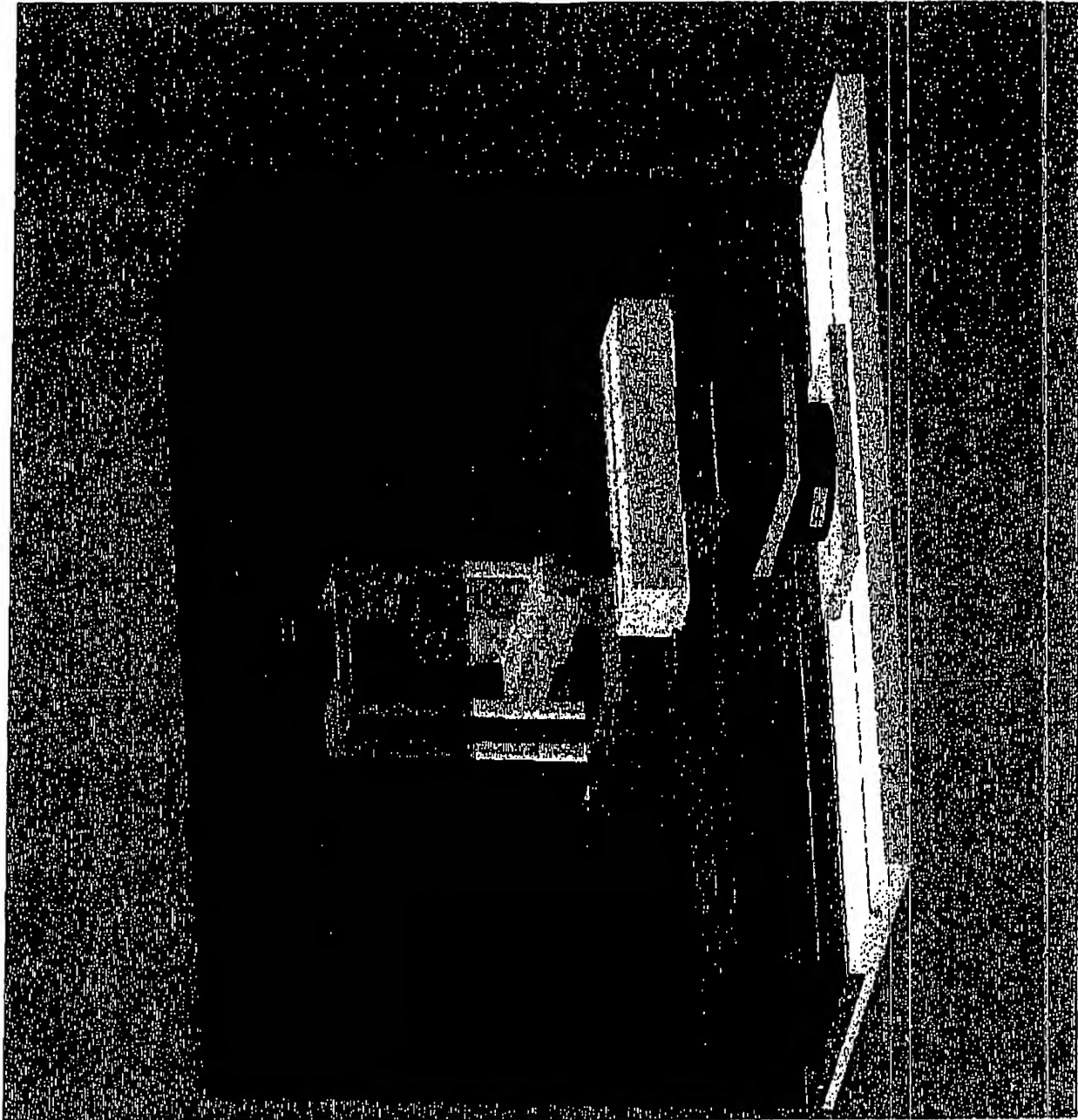
Cc: Ted Walker
Randy Kincaid
John Rigby
Cedric King

0141B STC Laboratory
Abrasion Tester
Module Setup and Operation



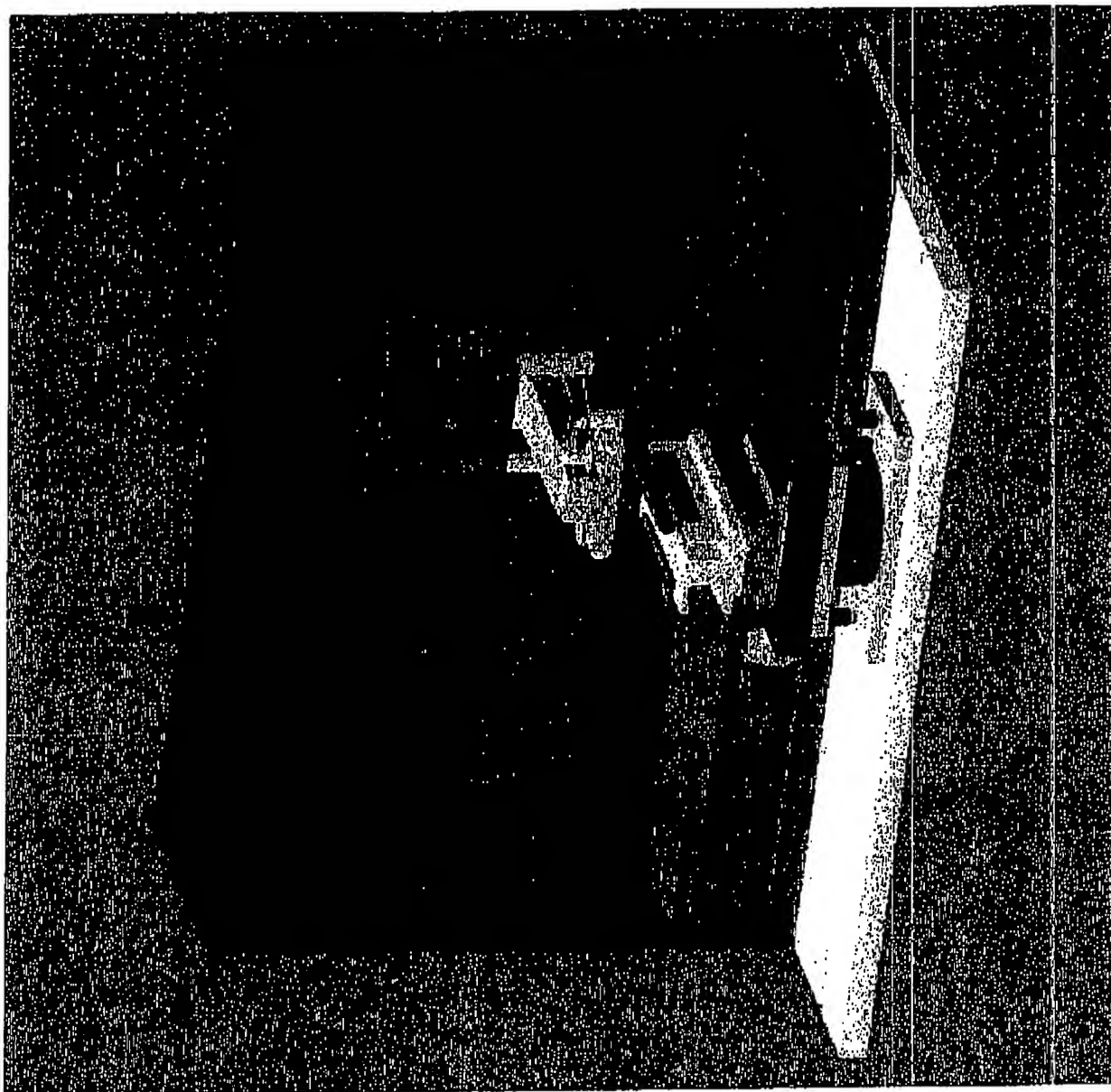
Glass Abrasion

In this setup, the machine will lower the glass until it touches the sample and then apply a 1 to 5kg load.



Glass Abrasion

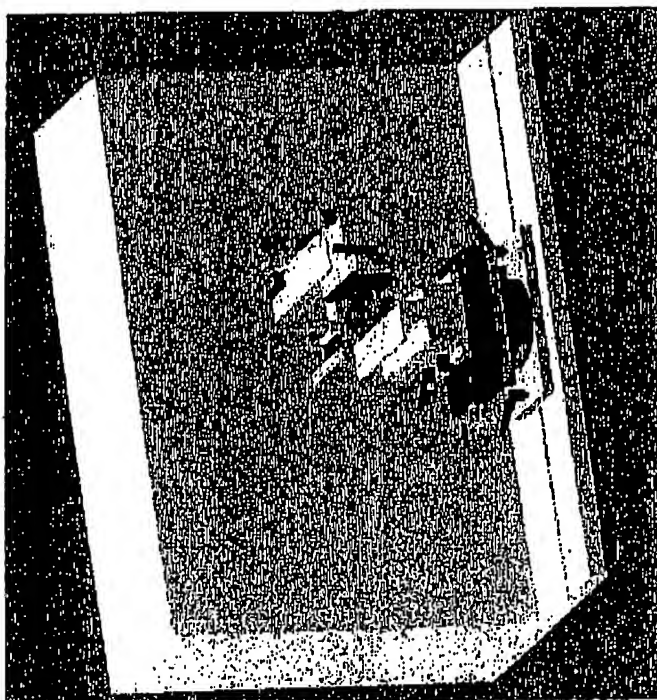
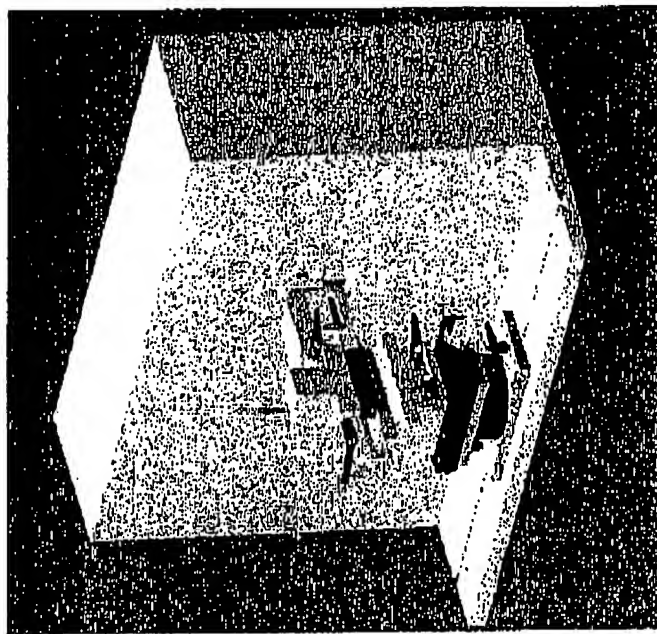
In this setup, the machine will traverse back and forth over the sample at the set frequency for the required number of cycles.



Fabric Scrub

In this setup, the machine will lower the fabric covered pad until it touches the sample and then apply a 300 gram load. Then the pad will traverse in one direction, then lift and return.

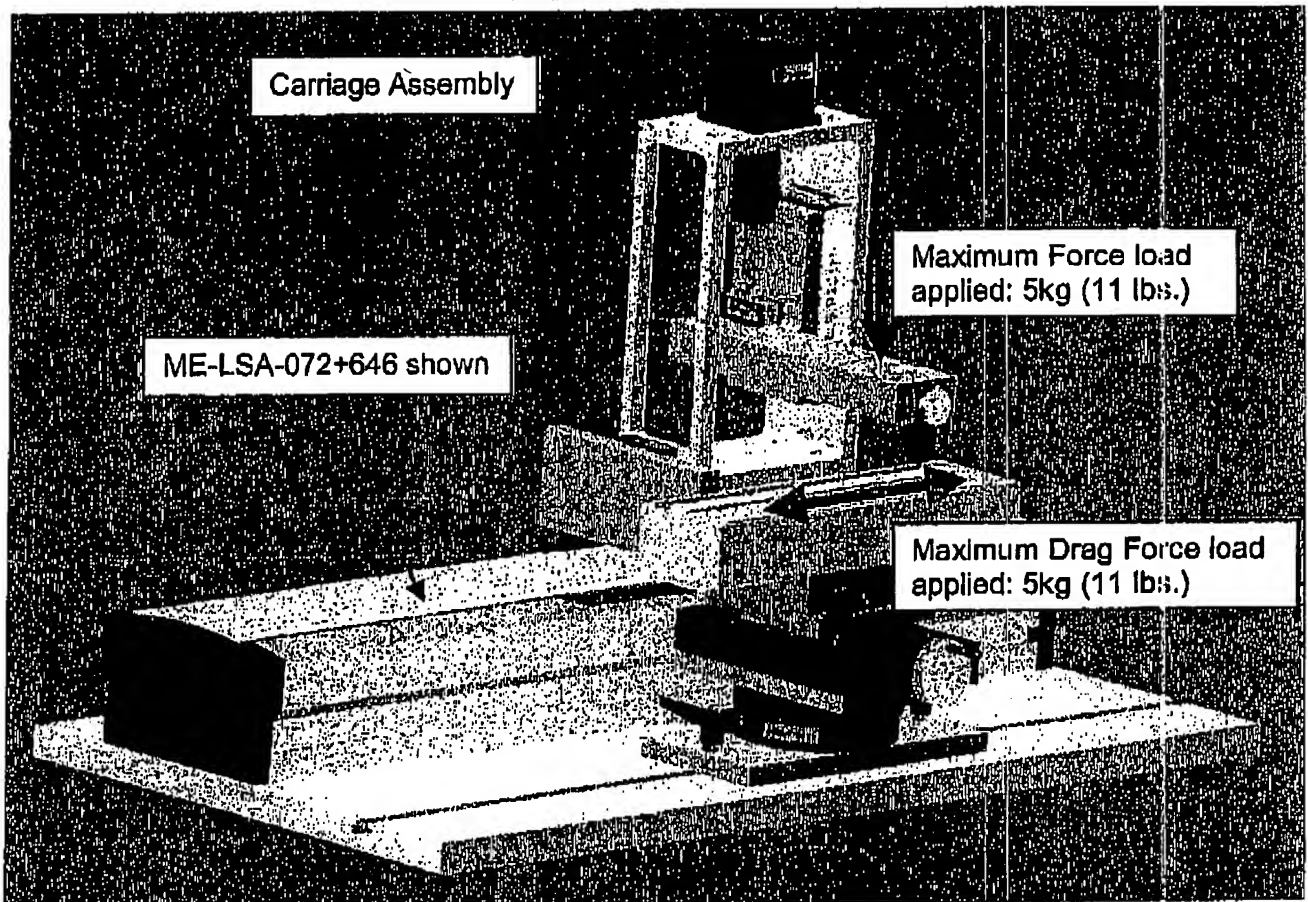
Additional test such as Ford Motor Company's Slam and Vibration testing can be performed on this machine using similar setups and routines.





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0141B Equipment Specifications



Required Cycling:

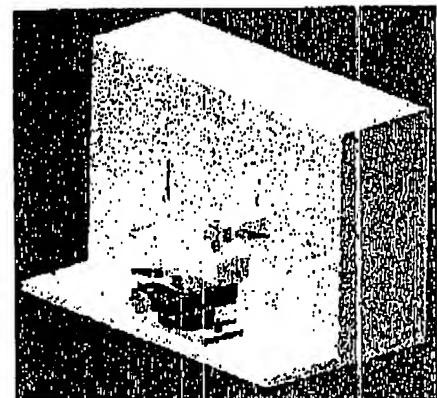
Test #1 (Glass Abrasion)

Stroke: 150 mm

Cycle rate: 60 per minute (1 cycle = forward and back stroke)

Force Load: 5 kg maximum

Drag Load: 5 kg maximum



Glass Abrasion

0141B Abrasion Tester Cycle Spec



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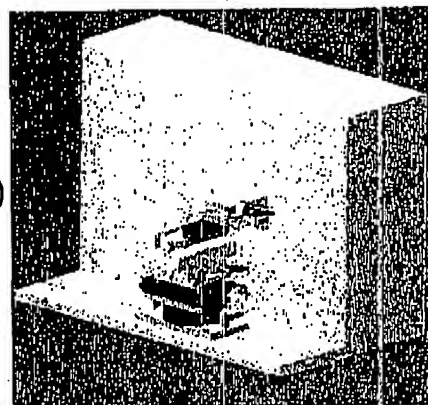
Test #2 (Fabric Scrub Abrasion)

Stroke: 100mm

Cycle rate: 15 per minute (1 cycle = forward stroke lift and return)

Force Load: 300 grams

Drag Force: Not Available



Scrub Abrasion

Test #3 (Slam Abrasion)

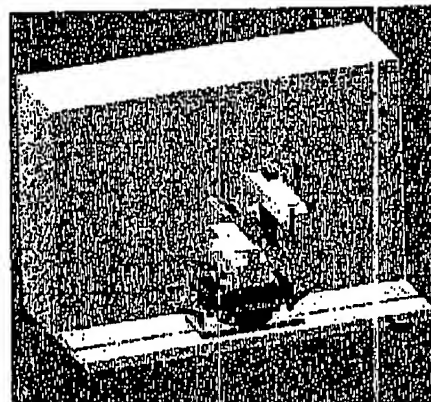
Stroke: 75mm

Cycle rate: 300 per minute

(1 cycle = forward and back stroke, no load on back stroke)

Force Load: N/A

Drag Force: 5 kg maximum



Slam Abrasion

Test #4 (Vibration Abrasion)

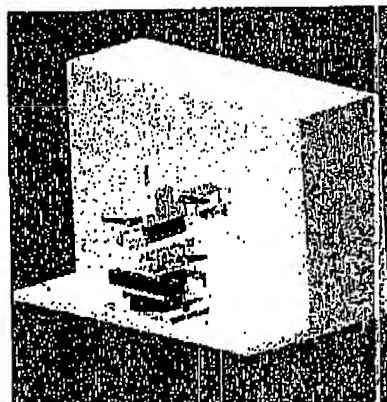
Stroke: 3mm

Cycle rate: 600 per minute

(1 cycle = forward and back stroke, no load on back stroke)

Force Load: N/A

Drag Force: 5 kg maximum

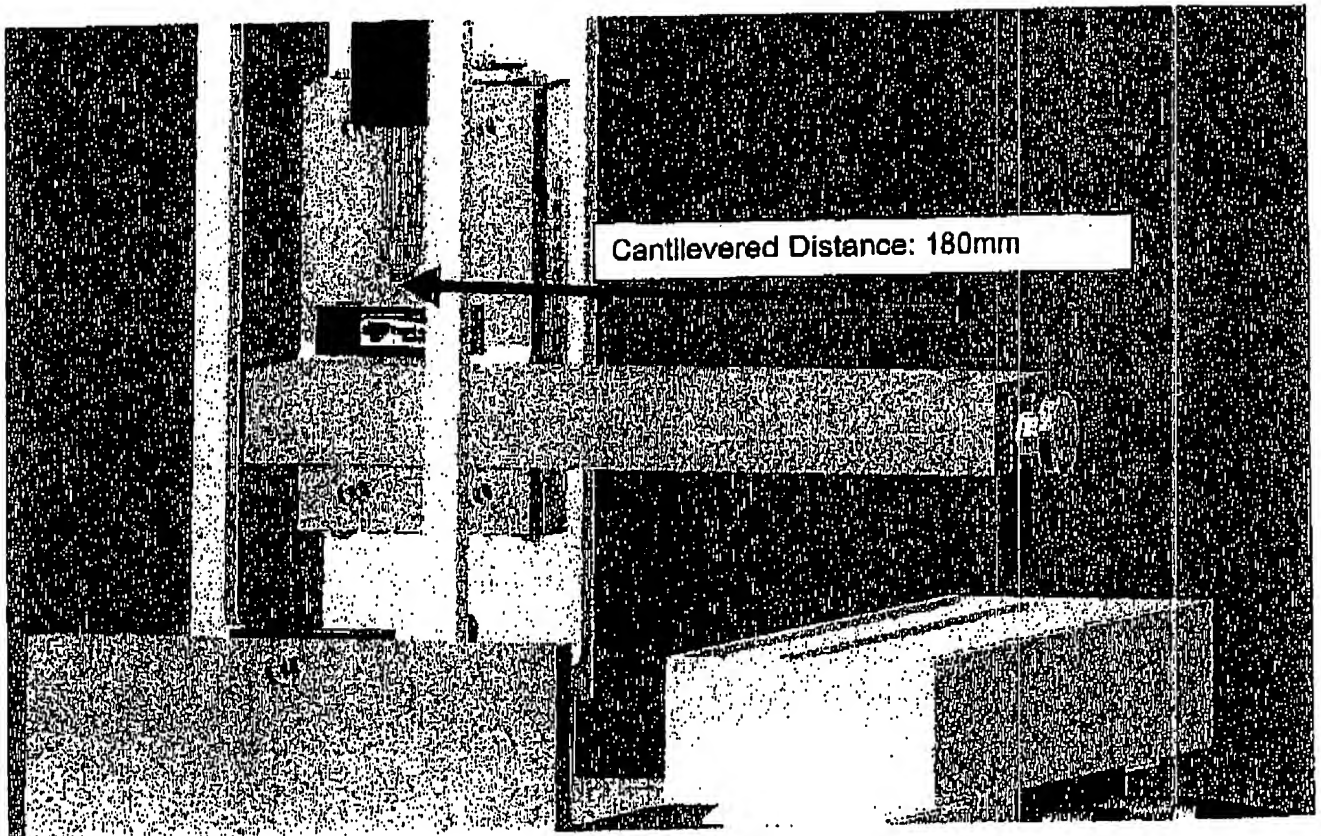


Vibration Abrasion



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Tel: (865) 977-0116 Fax: (865) 977-1663

Dynamic Load: approx. 7.5 kg (weight of Carriage Assembly)



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Fax: (865) 977-1663

ATTENDANCE RECORD

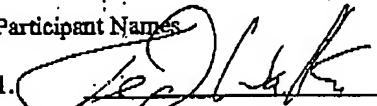
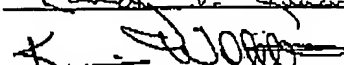
Type Meeting: 0141B SSTC Laboratory Abrasion Tester Concept Review

Date of Meeting:

Time to Meeting:

Sign-Off

Participant Names

1.		16.	
2.	Deborah Massey	17.	
3.	Randy B. Lyman	18.	
4.		19.	
5.		20.	
6.		21.	
7.		22.	
8.		23.	
9.		24.	
10.		25.	
11.		26.	
12.		27.	
13.		28.	
14.		29.	

Visitor(s):

Attendance Sheet.doc
Rev. 1

3(c)

METZELER 

Automotive Profile Systems

Technical Center

"FAXED"**Request For Quote**

Date:

Requestor: Kevin Willett

Vendor: Tennessee Tool & Engineering

Machine

Quantity	Description	Cost
3	0141B-02.10.24 Modules fabricated per 0141B-02.10.24 (Module Assembly) drawing specifications	\$500.00 ea.

Metzeler Automotive to supply through 3rd party vendor, the Linear servo actuators and load cells. A 3rd party controls company will be used. Outfitting of control will be done prior to module shipment. ✓

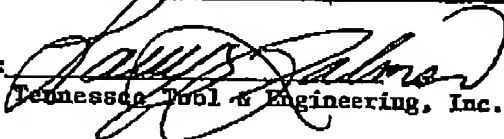
Tooling

Quantity	Description	Cost
3	0141B-02.10.28 Fabric Scrubber Head fabricated per 0141B-02.10.28 (Fabric Scrubber Sub-Assembly) drawing specifications ✓	\$3,420.00 ea.
3	0141B-02.10.29 Glass abrasion Head fabricated per 0141B-02.10.29 (Glass Abrasion Head Sub-Assembly) drawing specifications	\$3,600.00 ea.
3	0141B-02.11.19 Vacuum Block Head fabricated per 0141B-02.11.19 (Vacuum Block Sub-Assembly) drawing specifications	\$3,750.00 ea.
3	0141B-02.12.12 Paint Panel Holder fabricated per 0141B-02.12.12 (Paint Panel Holder Sub-Assembly) drawing specifications	\$4,500.00 ea.
3	0141B-02.12.05 Quick Clamp Flange Mount fabricated per 0141B-02.12.05 (Quick Clamp Flange Mount Detail) drawing specifications	\$4,150.00 ea.

Consumables

Quantity	Description	Cost
50	0141B-02.10.28-02 Scrub Fabric cut per 0141B-02.10.28-02-02 (Fabric Layout Detail) drawing specifications. Metzeler Automotive will supply the fabric required.	\$250.00 ea.
50	0141B-02.10.28-04 Abrasion Glass cut per 0141B-02.10.28-04 (Abrasion Glass Detail) drawing specifications	\$250.00 ea.

Submitted by:


 Tennessee Tool & Engineering, Inc.

Date:

\$19,500.00 each assembly

Note: Complete price breakdown will be provided if awarded this job.

3(d)

Cornerstone

Technical Group Inc.

Quoted to: **METZELER AUTOMOTIVE**
 2200 Stock Creek Blvd
 Rockford, TN 37853

Quotation

Quote Number:
 willett.

Quote Date:

Attn: **Kevin Willett**
 Delivery: **16 Weeks ARO**
 FOB: **FACTORY**

Page:
 1

Quantity	Item	Description	Unit Price	Extension
1.00		METZELER TESTSTAND to include: ·Control System will control and monitor three (3) modules running either the same or individual test programs simultaneously ·Control Cabinet/ Operator interface. (Suggested type Hammond Series 2000 Console, ASA 61 Grey mounted on Casters www.hammondmsg.com) ·HMI and Ethernet ready controller ·Expandable Analog and Digital IO ·The three (3) Servo controls mounted in the cabinet ·The three (3) Stepper controls mounted in the cabinet ·Keyboard and Optical Mouse interface ·Computer if intended must be at least a Pentium III 500Mgh with CD-ROM and Diskette Drives, Ethernet Connection and operate on Microsoft Windows XP ·Control Cabinet must have Quick Disconnects for each Module ·Programs to conduct testing as defined by Metzeler Automotive Profile Systems. Haydon Switch & Instrument 57000 Series Size 23 Captive Shaft Linear Actuator Order # 57H4A-3 25-008ENG Haydon Switch & Instrument Drive Card - Order # 40105	36,499.00	36,499.00
			0.00	
This quotation is valid for 30 days from the quotation date. Please note that our terms are 1%10 net 30. Any cancellation of an order is subject to a restocking charge.			Total	Continued

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<http://www.cornerstonetechnical.com/CTGTermsandConditions.pdf>

We appreciate your business.

120 Holiday Court, Suite 4, Franklin, TN 37067 Ph: (615) 599-5080 Fax: (615) 599-5090

Cornerstone

Technical Group Inc.

Quoted to: **METZELER AUTOMOTIVE**
2200 Stock Creek Blvd
Rockford, TN 37853

Quotation

Quote Number:
 willett6

Quote Date:

Attn: **Kevin Willett**
 Delivery: **16 Weeks ARO**
 FOB: **FACTORY**

Page:
 2

Quantity	Item	Description	Unit Price	Extension
3.00	ME-LSA-072-B646L-110	Transducer Techniques Load Cell Model MLP-75 THK	6,868.00	20,604.00
3.00	EN-208-00-000	Linear Motor Stage w/ Bearings, Feedback, Cable Carrier, and Flying Lead Cables EMERSON CT	1,490.00	4,470.00
3.00	FM-3DN	Digital Servo Drive, 9 amp cont., 18 amp peak EMERSON	1,235.00	3,705.00
1.00		Programming Module with DeviceNet CORNERSTONE	8,998.00	3,998.00
		750MHz Industrial PC w/ Windows XP, 75pt Control/View Development/Runtime Software, DeviceNET Scanner, Keyboard, Mouse, Touchscreen, and IO		
			0.00	
			Total	74,276.00

This quotation is valid for 30 days from the quotation date. Please note that our terms are 1%10 net 30. Any cancellation of an order is subject to a restocking charge.

Submittal of a purchase order is indication of acceptance of our terms and conditions. Our terms are available upon request or available at
<http://www.cornerstonetechnical.com/CTGTermsandConditions.pdf>

We appreciate your business.

120 Holiday Court, Suite 4, Franklin, TN 37067 Ph: (615) 599-5080 Fax: (615) 599-5090

3(e)



METZELER

Automotive Profile Systems
Technical Center

Request For Quote

Date:

Requestor: Kevin Willert

Vendor: Axis Fabrication & Machine Co.

Machine

Quantity	Description	Cost
3	0141B-02.10.24 Modules fabricated per 0141B-02.10.24 (Module Assembly) drawing specifications	13,800

Metzeler Automotive to supply through 3rd party vendor, the Linear servo actuators and load cells. A 3rd party controls company will be used, Outfitting of control will be done prior to module shipment.

Tooling

Quantity	Description	Cost
3	0141B-02.10.28 Fabric Scrubber Head fabricated per 0141B-02.10.28 (Fabric Scrubber Sub-Assembly) drawing specifications	1012 ⁰⁰
3	0141B-02.10.29 Glass abrasion Head fabricated per 0141B-02.10.29 (Glass Abrasion Head Sub-Assembly) drawing specifications	550 ⁰⁰
3	0141B-02.11.19 Vacuum Block Head fabricated per 0141B-02.11.19 (Vacuum Block Sub-Assembly) drawing specifications	4200 ⁰⁰
3	0141B-02.12.12 Paint Panel Holder fabricated per 0141B-02.12.12 (Paint Panel Holder Sub-Assembly) drawing specifications	1725 ⁰⁰
3	0141B-02.12.05 Quick Clamp Flange Mount fabricated per 0141B-02.12.05 (Quick Clamp Flange Mount Detail) drawing specifications	1620 ⁰⁰

Consumables

Quantity	Description	Cost
50	0141B-02.10.28-02 Scrub Fabric cut per 0141B-02.10.28-02-02 (Fabric Layout Detail) drawing specifications. Metzeler Automotive will supply the fabric required.	350 ⁰⁰
50	0141B-02.10.28-04 Abrasion Glass cut per 0141B-02.10.28-04 (Abrasion Glass Detail) drawing specifications	1400 ⁰⁰

Submitted by:

Jeff Willert

Date: _____

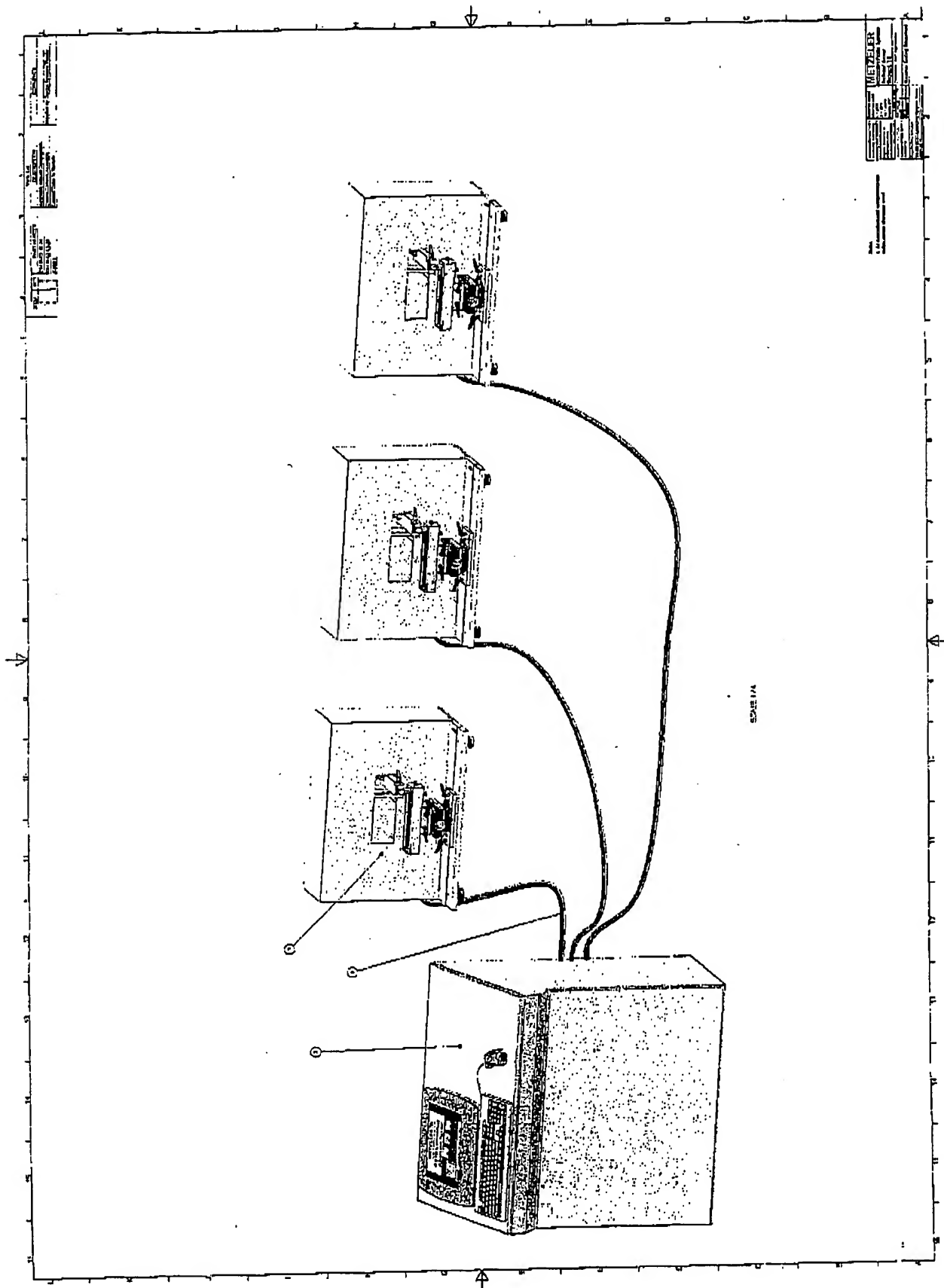
Axis Fab & Mach Co.

APR-08-2005 FRI 04:31 PM HARTER, SECREST & EMERY

FAX NO. 585 232 2152

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